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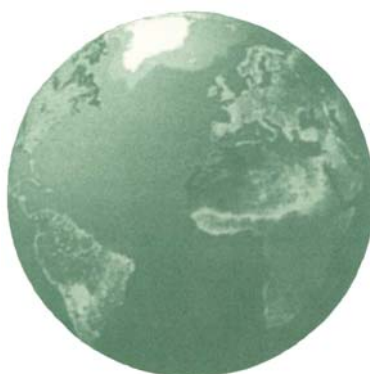
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**SUSTAINABLE-SETTLEMENT CRITERIA,
ECO-CITIES AND PROSPECTS IN CENTRAL
AND EASTERN EUROPE**



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SUMMARY

Eco-city movements constitute a special segment of the sustainable settlement aspirations. Using the classification devised by Mark Roseland, the paper established that the eco-city movement aims at achieving a new, consistent urban solution, while trying also to implement this solution in practice. The movement itself can be traced back to the 1970s in Berkeley, California. Since 1990, a series of international conferences has helped those following this approach to exchange experiences internationally.

Eco-city models make efforts to create comprehensive solutions, so that their approach amalgamates the social (community, cultural), economic and ecological dimensions. Implementing solutions in practice requires a manageable, people-centred scale and participants who handle it as their own objective. These conditions make eco-city initiatives territorially limited sustainability experiments.

The last decade and a half have brought huge and rapid social changes in the CEE transition countries, with post-industrial views and pressures combining with a learning process for collaboration in a new market economy. There were overestimates of the degree of environmental consciousness to be found in transition societies. These expectations were belied. The main trends have been along the Western path, with replication of all its mistakes.

Under these circumstances social lifestyle experiments such as the eco-city movement enjoy relative narrow support: very few followers and relatively little public interest in such experiments. Sectoral division is frequent within environmental (and other) projects. Although there are several movements, they are on the scale of an eco-village, rather than an eco-city.

INTRODUCTION*

The paper has got the following structure. The first part of the paper (Chapters 1 and 2) discusses some definitions and aspects of sustainability. Chapter 1 distinguishes the *external* and *internal* conditions of sustainability, from which the first follows a clear systems approach, while the second is not yet completely theoretically based. In the next chapter we classify the different types of sustainable settlement activities and define eco-city movements as integrated (not sector specific), new, urban solutions that are also implemented in the practice. The further part of the paper (Chapters 3 and 4) describes the special conditions in the Central and Eastern European (CEE) transition countries. These include the development gap, the democracy gap, and historical and geographical attributes. Finally the paper describes the efforts towards sustainable settlement in Hungary.

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1) SUSTAINABILITY

While an eco-city is not identical to a sustainable city, a proper understanding of the term ‘sustainability’ is of cardinal importance to the whole subject.

Susan Murcott (1997) collected 57 definitions of sustainability, published between 1979 and 1997, along with the associated sets of principles and criteria. These (or later definitions) cannot be quoted, classified or compared here, but there are two divergent approaches that need to be distinguished. Several definitions limit the criteria of sustainability to maintaining ecosystems and natural resources, while others speak of social, economic and ecological issues, wellbeing, equity, productivity, cultural and spiritual needs as well. Can sustainability, or even ‘sustainable development’ be understood and interpreted in such wide scale of meanings, or do several types of sustainability exist, so that the authors are speaking of different phenomena? Taking the latter to be the case, let us try to distinguish two important approaches to sustainability, before applying the term in the context of settlement.

1.1. External sustainability

There is always something that it is intended to sustain. It may be an activity, an institution, economic transactions, or in this paper, a settlement, but all these entities can be considered *operating sys-*

tems. That system and its operability are to be sustained.

Traditionally, in a systems approach, the system analysed can often be considered a black box, in the sense that it is unnecessary to deal with the specific internal operation of the system – in industrial production or cultural life, say. Attention is focused on the connections, the way the whole system is connected to its environment – the material or other *input* and *output* relations of the system.

Defining the conditions for durable operation of the system from the point of view of its environment means dealing with the parts of the system's operation visible from outside – simply the input and output flows to and from the 'black box'. From this perspective, the only condition for sustainability of the system is that the environment should be able to supply the system constantly with the inputs it needs and accept constantly the outputs from the system.

This is the angle from which to interpret the *external sustainability* of a system, by counting only the activities done to operate the system that are perceptible from outside. If the environment can offer the required conditions in limitless quantities (as nature was long thought to be able to do), there is no external constraint on the sustainability of the system. That is known not to be the case. The environment constitutes another system that is not able to supply or absorb limitlessly the needs of our human-made system. It is not a practical possibility to change the natural environment so that it can fulfil more needs. The human system is the one that has to adapt itself.

The criteria for the external sustainability reveal the conditions for doing

so. (1) The rate of utilization of resources (materials and energy) cannot exceed their rate of regeneration. (2) The rate of emission of pollutants cannot exceed their possible rate of absorption. These two criteria are *sufficient* for external sustainability. There is room for debate about whether they are *necessary* or too strict. Sometimes a third criterion is added: (3) utilization of non-renewable resources has to be limited to a rate no greater than that at which the resource can be replaced by renewable sources. This criterion brings two new points into the debate. The first is the possibility of *substitutability*. (This can only be understood as substitutability for a special human use, e.g. that of horses with motor cars for personal transport. It is clear that this possibility cannot mean that the extinction of the horses is part of sustainability.) The other is that the third criterion relates not to sustainability but to the way we can move from a present operation to a sustainable one. This difficult question does not concern the criteria of external sustainability.

1.2. Internal conditions for sustainability

The sustainability criteria for a system can be simple and comprehensible, but they have no connection with whether or how they can be achieved.

Take *population growth* as an example. The external criterion for a stable population are clear and easy to agree on: the birth rate must be more or less the same as the death rate. Yet within the system, in the everyday life of the population, this criterion has no meaning.

When a family decides on its number of children, there are many impacts influencing that decision: family tradition, religion, neighbourhood habits, economic pressure, incidental effects, *etc.* All these are quite different from the simple external mathematical criterion. Yet the external criterion is correct, the aim has to be a measure of stability, but the way to attain it is not to teach people about the birth rate and its importance. It is to install incentives affecting people in the family or generally, so that intra-system decisions approximate more closely to a globally desirable rate.

The case is similar with sustainability. The external criteria are simple and comprehensible, indeed closer to the thinking of people within the system than is the case with population growth, as such use of renewable resources makes sense within a sector, factory or settlement too. But comprehending and even agreeing with a constraint does not itself make the operation of the system change so that the criterion comprehended is better fulfilled. The new condition is added to many other conditions (and emotions, interests, habits, pressures, *etc.*) and cannot necessarily change the internal operation of the system to fit the external constraint better. The conditions that can assure that the internal operation of the system shifts towards a more sustainable mode (better fitted the external sustainability criteria) are among the internal conditions of sustainability. Drawing a distinction here between a shift towards more sustainable operation and a sustainable operation as such, it has to be said that the *internal conditions of sustainability* are what keep a system operating sustainably on that sustainable path.

All further elements in the definition are also internal conditions of sustainability. While the task is simply to fulfil the external criteria of sustainability, it is found that various intra-system conditions are indispensable to ensuring that its operation can shift to meet the external conditions. There are a few general internal criteria of sustainability, and from the point of view of internal operation of the system, there are huge differences between operational modes. Here already there is a difference between a factory, a branch of the economy, or a local community. It therefore seems better to focus on the internal conditions for the sustainability of settlements, rather than the general conditions for internal sustainability.

A good distinction between the two is apparent in the 'necessary conditions for global sustainability' advanced by Rees (1995). His scheme differs from the one in this paper, as he distinguishes three ecological stability requirements and three geo-political security requirements. The two first ecological stability requirements are identical to what have been called here external criteria, while the third relates to internal activity: economic activity protecting the essential life-support functions of the eco-sphere and preserving the biodiversity and resilience of the Earth's ecological systems. Similarly, all three geo-political security requirements are objectives that the internal system has to achieve: society has to satisfy basic standards of material equity and social justice; governance mechanisms have to be in place to enable an informed citizenry to participate effectively in decision-making; people have to share a positive sense of community cohesion (local and global) and a sense of collective responsibility for the future.

Looking at these requirements or turning back to the series of definitions of sustainability collected by Susan Murcott (1997), it can be stated that (of the two external sustainability criteria mentioned), the other points are goals and objectives, rather than true criteria. On the one hand, all the mentioned goals certainly seem important to sustainable operation, on the other, such lists generate a slight feeling of uncertainty. Why are precisely these conditions being enumerated? Could others be added or are any expendable? What is lacking is a systemic approach.

1.3. Integration of subsystems

Looking over settlement-centred literature dealing with the sustainability issue, it appears that authors frequently fail to analyse the operation of the internal system, though still calling it a system and dividing it into several (generally three) subsystems. The descriptions then handle these as sets rather than systems (while calling them sub-systems) and seek the interaction subsets of the overlapping boxes.

A comprehensive survey of integration of internal subsystems appears in Camagni *et al.* (1998), with a triangle of three subsystems – economic, environmental and social. The argument goes that these have main ruling principles – profitability/economic growth, ecology/aesthetics and pure-equity/welfare respectively – but none singly can assure sustainability in a pure form, only integration of them. The overlap between the environmental and social sets gives the environmental-equity subset (intra-

generational and intergenerational). Similarly, there is a subset sandwiched between environment and economy called long-term allocative efficiency, as pure ‘short-term profitability principles should evolve into a long-term allocative efficiency through the internalisation of negative externalities’ (*Ibid.*, p. 108). Between the economic and social spheres lies the distributive efficiency principle, unifying the earlier principles of profitability and pure equity. The authors state that interaction between the subsystems may bring positive and negative externalities. A sustainable city is one ‘where the three environments characterising an urban agglomeration interact in such a way that the sum of all positive externalities stemming from the interaction of the three environments is larger than the sum of the negative external effects caused by the interaction’ (*Ibid.*)

Interactions between environment, economy and society are also a starting point in Ravetz (2000), which analyses flows in new post-industrial, globalized city-region relations. Castells (2000) uses the same cornerstones, but integrates the components into sustainability differently. The complex phenomenon of sustainability is seen as having three dimensions: economic, social and ecological sustainability. These explain what to do for sustainability in the different fields, but the paper does not state that sustainability can be deduced from these dimensions.

While there is no debate about the fact that the sustainable city must integrate the operation of its subsystems, it is not so evident which subsystems are to be included in the model. Moomaw (1996, p. 426) uses the same triangle, but with different subsystems: ‘Culture, economy and environment [are] three

corners of a sustainability triangle that encloses well-being.’ So here well-being is the goal and reason of the whole integration – whereas in the previous account, well-being (or at least welfare) seemed to be a principle peculiar to the social subsystem. Another focus appears in Hancock (1996). There the centre of the triangle is health and three angles are economy, environment and community, while sustainability is just an overlapping subset of environment and economy, the subset between economy and community is equity, and the overlap of environment and community is liveability. Gibbs (1997) takes the view that ‘sustainability rests on four pillars: ecology, economy, democracy and community’

It can be concluded that the triangle seems to be a good formal tool to explain the need to integrate principles from different disciplines, but unsatisfactory as a way of selecting the components for the internal sustainability criteria of a settlement.

1.4. The urban metabolism

As there is a broad agreement on external sustainability criteria, it seems logical to connect the systemic internal approach with that of input and output flows. The latter concentrate on material flows passing physically through the city (throughput). Girardet (1992) distinguishes linear metabolism (such a city ‘takes what it needs from a vast area, with no thought for the consequences, and throws away the remains. Input is unrelated to output,’ *Ibid.*, p. 23) from circular metabolism (where ‘every output can also be used as an input into the production

system’ *Ibid.*) The idea provides a general framework embracing the industrial, household, trade, waste, *etc.* flows in a city or in a region.

Daly (2002) suggests using a throughput-centred approach on an even more basic level. There are two main abilities of a system that we want to sustain, he suggests: utility of operation and throughput flow. Generally, definitions and theories aim at maintaining utility, which is non-measurable and cannot be bequeathed to the future. Nonetheless, economists use it and try to measure it with market price, but eschew the use of throughput. Throughput-centred thinking, the paper argues, should be the common element in a common language in economics and sustainability issues. However, the paper says it is illusory to assume that a city or even a region can be based exclusively on circular metabolisms: ‘Economists are very fond of the circular flow vision of the economy, inspired by the circulation of blood... Somehow the digestive tract has been less inspirational to economists than the circulatory system. An animal with a circulatory system, but no digestive tract, could it exist, would be a perpetual motion machine’ (*Ibid.*, p. 2). So also for cities, it is important to try to introduce as much circular metabolism as possible and to accept that there is always room for linear metabolism.

That applies even more if a city is considered without its region. A city is by definition an artefact environment (Camagni 1998 p. 105) and absolute priority for the natural environment would cancel cities altogether. (This leads back to the importance of an integrated ap-

proach to the social, economic and environmental principles).

1.5. Development and internal integrity

While a metabolism approach helps to deal with everyday operational flows, systems must also adjust to temporal change in whole system-structures. ‘Sustainability for cities should be not simply the conservation or the preservation of the conditions of the reproduction of what it is, but an expanded reproduction... [with] new aspirations and corrections of illnesses of cities as they are today’ (Castells 2000, p. 119). Sustainability definitions generally deal with the time dimension of changes (‘for future generations’), but with cities or regions, it is important for sustainability to cover control over time (intergenerational solidarity) and control over space. This aspect is closely tied to the locality/globality problem, as control over space means that ‘a space where people organise their lives may retain its autonomy and its meaning independently from the evolution and dynamics of the space of flows, where most dominant functions and power are organised... So it is the defence of the place versus the flows, not necessarily to eliminate the space of flows or to eliminate its function...’ (*Ibid.*, p. 118).

Another aspect is touched upon in Carroll and Stanfield (2001), when dealing with sustainable regional economic development. The paper points to the importance of the pace of the change relative to the ability of local structures to adapt to the changes: ‘An integral

part of sustainability is the maintenance of relative consistency in the cultural and institutional structure. This does not mean that the region’s socio-economic structure cannot evolve over time; social entities certainly do evolve and transform. What it does mean is that this change cannot be so rapid that individuals within the system are left without norms or values that define their existence’ (*Ibid.*, p. 470).

* * *

With the internal conditions of sustainability, there is a tendency for authors to gather several positive, desirable, even tempting features and identify these with sustainability. There have been important attempts to arrange the characteristics in logical order and initiatives towards a systemic approach when selecting key features. At the moment, this theoretical background seems still unsettled and incomplete. Let us summarize the range of the issues covered according to the classification in Alberti (1996). The paper discerns three groups of urban sustainability dimensions: (1) urban flows, such as energy, water, materials, and adding also information and technologies, (2) urban qualities, such as environmental quality, human health, efficiency, equity, diversity/flexibility, accessibility, and learning; and (3) urban patterns: functions, (sectors) structures (form, density, heterogeneity, connection) and community (population, economy, society). It can be seen that the classification is arbitrary, but the items largely coincide with those that appeared in the metabolism, subsystem set and other approaches mentioned earlier.

These are the items mentioned in some way in the sustainability dialogue. These items seem still to be awaiting a

more consistent organizing principle, under the umbrella of internal sustainability.

2) ECO-CITIES WITHIN THE VARIOUS SUSTAINABLE SETTLEMENT DEVELOPMENTS

The more general approach of sustainable settlements or urban settlements brings us to the subject of *eco-cities*. There are no strict or consistent boundaries between groups, approaches and definitions in this respect, but the topic can be approached in two ways. One is to describe the activity of the groups that define themselves as dealing with eco-cities and the other to try to adapt existing classifications found in wider literature.

2.1. *Activists' self-definition in terms of eco-cities*

Following the first line, the denomination 'eco-city' originated in the mid-1970s, when Richard Register and a few friends founded a civil organization called Urban Ecology and began to refer to as an eco-city the kind of urban reconstruction 'in balance with nature' that they aimed at achieve. International recognition for the term came in 1990, when the same group organised the First International Eco-city Conference in Berkeley, California, with several hundreds of papers and speakers. Since then, there have been similar conferences in almost all even

years, in Australia, Africa, South America and (in August 2002) in China.

According to the call for papers for that conference, 'Eco-city is a living whole system, a natural and human-made unity having economically productive and ecologically efficient industry, systematically responsible and socially harmonious culture, and physically beautiful and functionally vivid landscape' (Fifth 2002).

The founder classified and published eco-city principles in four groups (Register 1985): (1) small scale – highly qualified, (2) access by proximity, (3) small-scale recentralization, and (4) diversity is healthy. While these principles cover material-flow minimization, mobility, city structure, and diversity, there are no sharp or determining differences between these principles and the more general sustainable-settlement principles surveyed in the previous section. (Furthermore, they differed much more from the generally accepted ambitions when published in the mid-1980s than they do now.)

A similar conclusion can be reached from reviewing a wider list of ten principles given in 1996 by Urban Ecology, the core organization of the movement (Roseland 1997). These are (1) compact, diverse, mixed use, (2) access by proximity, (3) restoring damaged urban environment, (4) convenient mixed housing, (5) social and minority justice, (6) greening and gardening, (7) reducing and recycling, (8) ecologically sound business activity, (9) discouraging excessive consumption, and (10) increasing awareness of the local environment

2.2. Eco-cities in existing classifications

Roseland (1997), in exploring the evolution of the concept of the eco-city, finds that sustainable settlements are only one of the roots of the movement. The others are appropriate technology, community economic development, social ecology, the green movement and bio-regionalism. All these have their philosophies, but ‘it is at present safe to say that there is no single accepted definition of “eco-cities” or “sustainable communities”’ (*Ibid.*, p. 201).

Roseland divides existing movements into four groups: designers, practitioners, visionaries and activists. These can be arranged along two scales. The vertical axis adopts Roseland’s theory-practice distinction, while the horizontal distinguishes those based on the present situation from those embodying a revolutionary future scenario.

Table 1
Typical approaches in literature on urban sustainability

	Status quo-based	Future conditions-based (clear page, new ideas)
Theory-based	Designers	Visionaries
Practice-based	Practitioners	Activities

Source: Based on Roseland (1997).

Table 2.
Positioning eco-cities according to Table 1

	Status quo-based	Future conditions-based (clear page, new ideas)
Theory-based	Cost of sprawl Sustainability by design	Sustainable communities Community self-reliance
Practice-based	Sustainable urban development Sustainable cities Local sustainable initiatives	Green cities <i>Eco-cities</i> Eco-communities

Source: Based on Roseland (1997).

Using these scales and accepting Roseland’s classification of eco-cities in the activists’ group, it is possible to define the eco-city movement as one of those aimed at achieving a new, consistent urban solution and trying to implement the solution in practice.

A few other facts follow from these two dimensions. The term eco-city relates to relatively small, limited areas within the urban texture. (Otherwise there would be no hope of implementing the concept.) On the other hand, it aims at complex, holistic solutions in the selected area. (Otherwise it would not fit the ideal-operation notion.) Thus sectoral, partial solutions aimed at sustainable operation of the city in a single sector (selective waste management, reduced traffic, energy-efficient buildings, *etc.*) are *not* eco-city movements in themselves, even if they can give important input into eco-cities. The movement always involves a life-style commitment and a community element for those participating in it.

Changing urban centres/whole regions into sustainably operating units is obviously a slow, gradual process, even if completion is known to be urgent. There are various partial approaches, the earlier ones being limited to protecting the elements of an already polluted/degraded environment (end-of-pipe solutions). A more

recent approach is to integrate the environmental principles into different economic activities and sectors, and trying to prevent the acts that pol-

lute the environment most. The eco-city movement shows another way, in trying in a spatially confined area to create a liveable urban (or rural) life that is sustainable in each of its elements.

3) SPECIAL CIRCUMSTANCES IN EASTERN AND CENTRAL EUROPE

During the years when the eco-city movements were starting in the mid-1970s and environmental concerns were gaining currency in the industrialized world, the CEE countries were still Soviet-controlled, centrally planned economies. This precluded the kind of activity by voluntary movements that played a crucial role in bringing environmental issues into the public eye in western countries, even if it conflicted with the interests of the main production centres. The Soviet-bloc countries had no voluntary movements, only formal, hierarchical, centrally organized movements controlled by the same political centre that controlled the economy. The party-state was very sensitive about preventing variant local or independent opinion and jealous of the political monopoly of the communist party.

However, alternative environmentalist views slowly gained semi-legal status in the early 1980s while political pluralism was still officially taboo. To some extent, the environmental movement became safety valve for people barred from expressing opposition political views. By the late 1980s, the environmental movements had grown very big, offering the illusion (for both western

and local observers) that the environmental awareness is widespread in the centrally planned economies. There was an accompanying illusion that the advances being made so slowly in western societies could be introduced more easily in the eastern part of Europe.

The fallacy in these hopes became clear as the change of system progressed. The advent of multiple political parties deprived the environmental movements of the attention of those who had joined them simply out of sublimated political opposition, who now gravitated to the new parties instead. Furthermore, the last decade and a half have seen marketization of the economy somewhat reminiscent of early forms of capitalism in the 19th century, rather than the 20th or 21st century.

These processes have also been dominant in the cities. Income differentials have increased and unemployment has appeared (if not primarily in urban areas), along with homelessness, urban segregation, suburbanization, failures in heavy industry, abandonment of factories, and building over of green areas. State-owned housing has mainly been privatized without provision being made for its renovation. Motorization and aggressive satisfaction of short-term motorized needs have continued. Big shopping centres have changed the structure of trading, with many investment projects on the edges of cities.

All these changes have been very rapid and made in contradiction of declared environmental principle, although they have promised short-term advantages or involved influential circles in society. People in the centrally planned economies were inured under the state-socialist system to hearing that they had

to shoulder difficulties for the sake of a better future that never arrived. Corruption and low levels of political and business morality were also teaching people that their sacrifices would only benefit others better placed to profit than themselves.

Camagni *et al.* (1998) refers to the empirical function between per capita income changes and environmental per capita changes. In very poor countries (at a pre-industrial phase) and in most developed post-industrial societies, growth in income is accompanied by an improvement in environmental quality, albeit for different reasons. The industrial phase between these brings per capita income increases accompanied by a fall in environmental quality. The transition countries in general have not yet emerged from that development phase, which places them in a frustrating situation. As they prepare to join the EU, they encounter legislation suited to the Western European level of problems. Legislative harmonization forces the transition countries to make their regulations compatible with a level of development higher than their own. At the same time, they encounter other pressure to allow investments by corporations from EU countries and elsewhere that have all the consequences just outlined.

3.1. Categorizing the special features of the transition countries

It is worth distinguishing three types of special feature in the CEE countries, with different effects and relations to changes in time.

3.1.1. Development gap

There is a development gap measurable in GDP per capita between the eastern and western halves of Europe. The problems in the former resemble those found in other countries at a similar level of income. As mentioned in the previous section, the positive conjunction of income growth and environmental quality in the post-industrial phase in western countries contrasts with a negative effect in the transition and other industrial countries. Conforming to post-industrial regulatory mechanisms is not enough to solve these problems. Special regulations using accepted principles and objectives have to be worked out in way adapted to the mechanisms of the industrial situation.

3.1.2. Democracy gap

This group of the features originates from forty odd years of socialization to a one-party system and a centrally planned economy in the transition countries. These features make Eastern part of Europe different from other countries with similar GDP. The crucial problems are adaptation to the market economy and pluralist democracy while meeting post-industrial economic expectations. These superimposed tasks may put pressure on their social structures or even cause them to break down. Development of a sustainable settlement or an eco-city presupposes an efficient cooperative social system and a more community-centred thinking.

Herrschel (2001) also stresses the importance of learning and accepting this special background: 'A more sensi-

tive interpretation and understanding is required of the particularities and uniqueness of postsocialism as a societal-economic condition in its own right, and the concept of the environment within that.'

3.1.3. Historical and geographical specialities

Theoretically, there is a room for a third type of difference. Urban structures and social structures change very slowly, often with a very long-term memory. So the economic and political or geopolitical gaps mentioned may be accompanied by cultural influences dating back to earlier periods of history. Central and Eastern Europe has long acted as a buffer zone between the empires and cultures of East and West. This is apparent in religious, cultural and political demarcation lines, of which the Iron Curtain and the Schengen borders are the most recent examples. These historical differences have also influenced urbanization since the Middle Ages and the role of urban citizens in their countries. Although it is not possible to explore here the question of which effects transmitted from the past may influence the formulation of sustainable urban development, this possible source of difference from Western European practice may well be worth analysing further.

3.2. EU-based processes for sustainable settlement in CEE countries

The Pan-European Conferences on Sustainable Cities had objectives summarized, for instance, in Csagoly (1999). The second, in Lisbon in 1996, decided to hold four regional conferences in 1998–9 to explore the specific urban problems of the North, South, East and West of Europe. The CEE countries were covered partly at the northern (Baltic) conference and mainly at the eastern conference in Sofia, entitled 'Towards Local Sustainability in Central and Eastern Europe'. Some 280 municipal representatives and environmentalists from 70 cities and 30 countries looked at the subject of current local sustainable development initiatives and stimulating new ones in the CEE region, while raising awareness of the implications of EU accession and funding opportunities (Csagoly 1999). Unfortunately, the concluding statements at the four conferences were general documents. The Sofia statement, for example, had no bearing on the topic of eco-cities in Central and Eastern Europe.

While the objectives formulated are too general to indicate or initiate realistic and suitable local targets, local authorities feel they lack funds, not prospective targets. Löffler and Payne (2000) summarizes a report by the Office of the European Sustainable Cities and Towns Campaign following the Sofia conference, prioritizing the perceived needs: 'The study ranks money as first on the "wishlist for sustainable development"... Second place is occupied by the desire to have a higher degree of local self-governance accompanied by more finan-

cial autonomy... Third, the report identifies disappointment from CEE cities and towns about the lack of support provided by their own national governments.' This would seem to mean that local authorities rank money second and third, as well as first, as 'financial autonomy' and 'support from the government' are simply euphemisms for funding. It would be interesting to analyse what organizations lie behind these conclusions, which raise a suspicion that vested interests may be involved in granting the money as well as receiving it. All the present author's studies suggest that it is *not* possible to buy sustainability for money alone.

4) SUSTAINABLE SETTLEMENT EFFORTS IN HUNGARY

In surveying Hungarian experiences, let us begin with efforts and instances that fit the definition of an eco-city closely, i.e. which aim at a new, consistent urban solution, while trying to implement such a solution in practice. Within that narrow frame, it can be stated that no activity in Hungary so far has fitted that description exactly. Keeping to the essence of the approach, but going beyond an urban context, there come into the picture bio-regions, eco-villages and eco-regions. A good survey of these appears in Szántó (2002), whose classification can be adopted.

4.1. Eco-villages and bio-regions

A bio-region is a small natural unit, such as a basin bounded by a watershed, taken as a basis for introducing environmental consciousness and sustainable management. The concept was adopted and developed by Béla Borsos, who has also been one of the few people to migrate to a depopulated village, Gyúrúfű in South Hungary, where he set up home in the early 1990s (Borsos 1994). This lifestyle model otherwise fits the definition fully, as he tried to establish a community whose members could control all the metabolisms that they used as throughput.

There are several other less purist sustainable-village projects in Hungary where the objectives of development have to be agreed with an existing population. The Autonomous Local Region Project organized by the Independent Ecological Centre (Ertsey 1999) surveyed the Dörögds Basin in Western Hungary, which contains five small villages. The project outlined three social-economic-ecological scenarios and more detailed analysis was made for the most important metabolisms as the energy circles and the water circles.

Another project, in Eastern Hungary, is called 'Gömörszőlős the sustainable village' (Ökológiai Intézet 2001). A Miskolc-based private institution is working on a small model farm, intending to provide a model for local residents and prospects for similar villages. The village has about a hundred mainly aged inhabitants, so that another interesting aim is to improve the demography by attracting immigrants.

4.2. *Eco-regions*

Another popular expression 'eco-region' is also popular in Hungary. The biggest eco-region referred to is the entire Carpathian Basin, of which Hungary occupies the centre. Harmonious and concerted management of the Carpathian eco-region is an important objective of all Hungarian governments, as the country itself is exposed to ecological changes in areas surrounding it, but that subject goes beyond the scope of this paper.

There are also environmentally friendly local and regional development projects within Hungary known as eco-regions, especially two resort-area projects: Ráckeve-Soroksár Danube Eco-Region south of Budapest and Lake Tisza Eco-Region. Other eco-regions have been designated near Zalaegerszeg, Kiskunhalas and Kalocsa, in Somogy County, and in the Great Plain. Here the meaning of the term is an environmentally prioritised project for managing a limited zone as a sensitive area.

4.3. *Cities*

The Independent Ecological Centre initiated the Community Environmental Action Project in 1992–3, along with the Institute for Sustainable Communities in Montpelier, Vermont. The purpose of the 18-month Hungarian Community Action project was to demonstrate how local-government authorities in Hungary can set environmental priorities, develop action plans and implement cost-effective strategies to address serious problems in the community through participatory

planning and decision-making. The project covered two demonstration communities: Mosonmagyaróvár (population 35,000) and Sátoraljaújhely (population 25,000). The training focused on comparative risk analysis, public participation, action-plan development, environmental education and leadership skills. The project resulted in the first curb-side recycling programme in Hungary (Sátoraljaújhely) and a river protection programme (Mosonmagyaróvár). In 1994–5, the IEC replicated the project in Szentendre and Baja, and conducted training for representatives of 15 other communities on implementing such a project. (IEC 1993).

Although these programmes attach great importance to extended local participation, they are typically focused on selection of the main problem and on its whole cycle, while still relying on a sector-based solution. This is not a criticism, but a fact, demonstrated by the way these projects in towns with 25,000–35,000 inhabitants tightened their focus by topic, not by territory, and in this respect differ from the eco-city approach.

Another project dealing with sustainable cities was coordinated by the Regional Environmental Centre in Szentendre. This dealt more with concepts such as defining a sustainable city and does not meet the practical, comprehensive expectations of an eco-city. Nonetheless, it is worth quoting some of the findings, in which the REC sums up the barriers to a sustainable settlement in a CEE country.

'The main barrier is that environmental issues are still considered to be of secondary importance after economic progress. Many Central and Eastern

European cities follow the Western example: first economic development, then environmental remediation [*sic*]... even though it is already known that environmental considerations do not necessarily threaten economic development. In fact they push the economy towards higher efficiency and urge the formation of knowledge based societies.

‘The complex interactions between the natural environment/economy/society are not sufficiently considered. Usually isolated problems are addressed. Decision makers tend to look at the costs of urban sustainability, and place less emphasis on the benefits. The notion of environment vs. economy is still prevalent, even though lots of examples show that eco-efficiency can bring real savings through more efficient production practices. It is extremely hard to break out from a consumer society and give up wasteful habits. People strongly resist changing their lifestyles. *E.g.* drive less, purchase environmentally conscious goods, collect waste separately, become more active members of civil society/be less passive, become more responsible (‘just not in my backyard...’), *etc.* Business lobbies of energy/material intensive or environmentally controversial industries are still very strong. *E.g.* oil industry, car manufacturers, power generators, tobacco industry, chemical industry, throw-away product producers, *etc.* A weak democratic system increases the power of various interest groups. Big social problems may hinder law enforcement, co-operation in problem solving, acceptance of environmental principles, long-term planning, *etc.*’ (REC website).

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REFERENCES

- Alberti, Marina (1996): Measuring urban sustainability. *Environmental Impact Assessment Review* (= *EIAR*)16:4–6, 381–423.
- Borsos, Béla (1994): *Az élet kereke* (Wheel of life). Budapest: Liget Műhely Alapítvány.
- Camagni, Roberto, Robert Capella and Peter Nijkamp (1998): Towards sustainable city policy: An economy–environment technology nexus. *Ecological Economics* 24:1, 103–18.
- Carroll, Michael C., and James Ronald Stanfield (2001): Sustainable regional economic development. *Journal of Economic Issues* 35:2, 469–76.
- Castells, Manuel (2000): Urban sustainability in the information age. *City: Analysis of Urban Trends, Culture, Theory, Policy, Action* 4:1, 118–22.
- Csagoly, Paul (1999): Sustainable cities. *Bulletin Regional Environmental Centre* (=BREC, Szentendre), Spring.
<http://www.rec.org/REC/Bulletin/Bull833/InfoFunds.html>
- Daly, Herman E, (2002): Sustainable Development: Definitions, Principles, Policies. Invited Address, World Bank, April, 30. Washington, DC
- Ertsey, Attila, *et al.*, eds. (1999): *Autonom kistérség* (Autonomous local region). Budapest: Független Ökológiai Központ Alapítvány. 176 pp.
- EU Sustainable Cities Project:
http://europa.eu.int/comm/environment/urban/home_en.htm

- Fifth International Eco-city Conference. (2002): First announcement and call for papers.
- Gibbs, David (1997): Urban sustainability and economic development in the United Kingdom: Exploring the contradictions. *Cities* 14:4, 203–8.
- Girardet, Herbert (1992): *The Gaia atlas of cities – New directions for sustainable urban living*. London: Gaia Books Ltd.
- Hancock, Trevor (1996): Health and sustainability in the urban environment. *EIAR* 16:4–6, 259–77.
- Herrschel, T (2001): Environment and the postsocialist ‘condition’. *Environment and Planning A* 33:4, 569–72.
- IEC (1993): Community Environmental Action Project (1992-1993) Mosonmagyaróvár and Sátoraljaújhely. Budapest: Hungarian Independent Ecological Centre, and Montpelier, VT: Institute for Sustainable Communities.
<http://www.iscvt.org/pshungary.html>
- Löffler, P., and A. Payne (2000): Toward sustainable cities, again. *BREC* 9:2.
- Moomaw, William R. (1996): A sustainability postscript. *EIAR* 16:4–6, 425–27.
- Murcott, Susan (1997): What is sustainability? Paper presented to AAAS Annual Conference/ IIASA Sustainability Indicators Symposium, Seattle, WA, February 16, 1997.
<http://www.sustainableliving.org>
- Ökológiai Intézet: (2001): GömörSZőlös a fenntartható falu (G., the sustainable village).
<http://www.ecolinst.hu/alkeret3.html>
- Ravetz, Joe (2000): Integrated assessment for sustainability appraisal in cities and regions. *EIAR* 20:1, 31–64.
- REC website: What is a Sustainable City? The Regional Environmental Centre for Central and Eastern Europe
<http://www.rec.org/REC/Programs/SustainableCities/Regional.html>
- Rees, William E (1995): Achieving sustainability: reform or transformation. *Journal of Planning Literature* 9:4, 343–61. Reprinted as Chapter 2 in *The Earthscan Reader in Sustainable Cities*. Ed. D. Satterthwaite. London: Earthscan, 1999.
- Register, Richard (1985): Eco-city principles. In: *Context 1985*.
<http://www.context.org>
- Roseland, Mark (1997): Dimensions of the eco-city. *Cities* 14:4, 197–202.
- Szántó Katalin (2002): Fenntartható régió – Városias kistérségek fejlesztése. Elmélet és esettanulmány (Sustainable region – development of urban local districts. Theory and a case study). Doctoral dissertation. 80 + 106 pp.